GOVERNMENT OF ANDHRA PRADESH

ABSTRACT

AHDD&F Department - Organic dairy farming - By promoting Desi cow based products - Detailed Project Report – Approved - Orders – Issued.

ANIMAL HUSBANDRY, DAIRY DEVELOPMENT & FISHERIES (AH.I) DEPARTMENT

G.O.MS.No. 6 Dated: 11-01-2021.

Read :-

From the DAH, A.P., Vijayawada, Lr.Roc.No.3302/NRM/2020, Dt:01.10.2020.

<<>>

O R D E R:

Government after careful consideration of the circumstances stated by the Director of Animal Husbandry, Andhra Pradesh, Vijayawada in his proposal read above, hereby approve to implement the project of Indigenous Cattle rearing organically, as a model for Conservation of Desi Cow breeds along with Processing of Desi cow based products (Milk, Dung & Urine) which automatically provides health and hygienic environment. The approved Project Report for implementation of Indigenous Cattle is appended to this order as Annexure.

2. The Director of Animal Husbandry, Andhra Pradesh, Vijayawada shall take further necessary action accordingly as per rules in force.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

POONAM MALAKONDAIAH
SPECIAL CHIEF SECRETARY TO GOVERNMENT(FAC)

To
The Director of Animal Husbandry, Andhra Pradesh, Vijayawada.

Copy to:

PS to Additional Secretary to Chief Minister (CM), A.P. Secretariat.
PS to Minister (AHDD&F), A.P. Secretariat.
PS to Special Chief Secretary to Government, AHDD&F Department, A.P. Secretariat.
SF/SC.

//FORWARDED::BY ORDER//

SECTION OFFICER

(Annexure for P.T.O)

ANNEXURE

(G.O.Ms.No.6, AHDD&F(AH.I) DEPARTMENT, Dt:11.01.2021)

Detailed Project Report for Desi Cow - For Food Security, Livelihoods and Biodiversity

Introduction:

To increase immunity against the emerging diseases like corona-virus, people now have turned to organic products which are grown without medicines and chemicals. The organic dairy sector continues to be a fast growing segment as organic milk gives a feeling of safety and environmental protection to consumers and the global demand for organic products is creating a new export opportunity for developing countries. We consider Desi Cow as our Mother and worship the same which gives us milk along with the entire requirement for farming. Its dung is very best and highly enriched compost as Vermi compost, Panchakaviam, Crop Tonic, Amirthakarasal and pest controller.

Thousand of vegetations are growing themselves in the dung of our cow. The average production of cow dung/day is 10-12 kilograms and of cow urine/day is 5-6 litres. Very small proportion of this production is utilized these days. Proper utilization of cow dung and cow urine into manure, pesticides, medicines and other daily products can generate employment opportunities in rural areas as well it can protect soil from chemicals, fertilizers and improves soil fertility.

AIM:

- **Organic dairy farming** for producing milk, Ghee, yogurt, cheese, cream and other dairy products without the use of pesticides, synthetic fertilizers or antibiotics.
- Conservation of Desi Cow breeds, Processing of Desi cow dung & Urine products which automatically creates hygienic environment.

OBJECTIVES:

1. Encouraging shifting from chemical agriculture towards organic agriculture
2. To conserve the native breed desi cows
3. Integrated cycle of cow based products and its backward-forward linkages for income and employment generation in rural areas
4. Supply of cow milk and its products after value addition and prevention of malnutrition in villages.
5. Waste land development for food, Green fodder, fibre and employment generation.

Target Group:

- ✓ Self reliant Progressive farmers:
- ✓ village level Households (through integral approach of FIG/ FPG)

1. Progressive farmer:

A Progressive dairy farmer with an interest, to rear 50 cows in his farm organically can be identified and recommended loan for purchase of animals and machinery for processing of cow dung and urine. He may be provided suitable training in existing NKBC, Chintaladeevi, Nellore district, and Surabhi Goshala, Perikalapadu, Krishna (Dist) for making cow dung & urine by-products. Government will Handhold the project by providing bank loan, Certification, Branding of product as organic.

Basic requirements for organic livestock production

- Organic cattle must be fed 100% organic feed and grazed on organic pasture. Cattle must have access to pasture at least 120 days/year, consuming 30% of their dry matter intake from pasture during those times. Cattle must have access to shade, shelter, fresh air, clean water, and direct sunlight. Their habitat must also allow for exercise and the exhibition of natural behaviours.

- While Purchasing cattle, they must be managed organically for the last third of gestation to qualify as organic

Government support:

- Eligible Inspection and Certification:

✓ Animal Husbandry Department will certify that the produce is unadulterated and free from any form of antibiotics and there are no added growth hormones by testing milk through **HPLC/LCMS**.
✓ Ethno- Veterinary treatment will be provided by trained veterinarians.
✓ Agricultural Department may be requested to certify that the cows are not exposed to any harmful pesticide& insecticides after testing.

- By providing Bank **loan @ 12 % interest** to the beneficiaries.
- **Insurance**: Insurance coverage will be provided under **Y.S.R.Pashu Nastha Parihara Pathakam**.

Supply of Milk:

- Organic milk demand forecast will be indented from consumers with the help of Village **Volunteers** in Urban areas (Apartments).
- The availability of milk will be visible at kiosks placed in RBKs.
- Consumer will place order and pay the money to the digital assistant or online payment, and then organic milk will be supplied directly to the Consumers.
- Volunteers may be given Rs.1/ litre of milk **as incentive by the dairy farmer,** so that he can collect the demand for organic milk.

Economics of dairy farming consisting of 50 crossbred cows.

Herd/Livestock Expenses:

Cows = 50 indigenous / Desi- cows

Note: Bull is not maintained as breeding of cows will be taken care by A.I.
Cost of 50 cows @ Rs 50,000 per cow = 50,000 x 50 = Rs 25, 00,000

Annual depreciation: Assumed value after 7 years of productive life is Rs 20,000 for each cow. Therefore annual depreciation =2, 50,000-(20,000 x 50) /7 = 25, 00,000-10, 00,000 /7 = 2, 14,286.

Cost of construction: For covered area @ Rs 250/sq feet for 5000sq = 250 X 5000 = Rs. 12, 50,000,
Uncovered Area @ Rs 100/sq feet = 100 x 5,000 = 5, 00,000, Life of covered area = 50 years (assumed), therefore Annual cost of construction (covered area) 1250000/50 = Rs. 25,000 (depreciation)
Life of uncovered Area = 30 years
Annual cost of construction for uncovered area (depreciation)
= 5, 00,000/30 years = Rs 16, 667.

Sl. No.	ITEM	Type of structure	Area Required	Total Area required	Approximate Cost (in Lakhs)
1.	Buildings	Covered	100 sq feet/animal	5000 sq feet (Rs 250/sq feet)	12.5
2.		Uncovered	100 sq feet/animal	5,000 sq feet (Rs 100/sq feet)	5.00
3.		Roads and offices		1000 sq ft. (Rs 250/sq feet)	2.5
TOTAL					**20**

➢ Note:1 Acre = 43560 Square foot

Cost of land @ Rs 10, 00,000/acre (unproductive land for buildings) So for 0.25 acres = 0.25 x 10, 00,000 = Rs 2, 50,000
Annual cost @ 10% charged maintenance = Rs 25,000.
If farmer posses the land then above 2.5 Lakhs will be added to his profit.

Cost of Equipment:

Sl. No.	Name of the Equipment	Rate per item	Total Approximate Cost
1.	Chaff cutters 3 HP (electrically operated)	Rs 50,000	Rs 50,000
2.	Milk cans	4 @ 3,000	Rs 12, 000
3.	Wheel barrow Trolly (for dung disposal)	2 @ 5,000	Rs 10,000
4.	Tie chains for cows	50 @ 300	Rs 15,000
5.	Shovel/Spades	5 @ 150	Rs 750
6.	Trolley(for milk disposal)	3@ 5,000	Rs 15,000
7.	Miscellaneous		Rs 10,000
	Total		Rs 1, 12,750

Assume that life of equipment is 10 years. Therefore annual depreciation = 1, 12,750/ 10 = Rs 11,275.

Capital on herd, land, building and equipments costs.

S. No.	**Item**		**Approximate cost (Rs. In lakhs)**
1.	Cost of Herd		25
2.	Cost of land		2.5
3.	cost of Building	for uncovered area	5
		for covered area	12.5
		Roads and offices	2.5
4.	cost of Equipments		1.1275
5.	Maintenance cost(ex: like for processing & value addition of products		1.3725
Total capital			**50.00**

- ✓ If the Beneficiary is having his own land, investment on cost of Land (Rs.2.50 Lakhs) may be reduced
- ✓ **Rs.40 lakhs may be given as loan** and remaining taken as beneficiary share from the farmer.

Interest on fixed cost @ 12% = 40, 00,000 x 12/ 100 = 4,80,000

I. Total annual fixed cost = 2, 14,286 + 25,000 + 1,667 + 25,000 + 1, 12,750 + 4, 80,000 = 8, 58,703

II. Variable cost:

1. Fodder Expenses:

a) Green fodder @ 30 kg/day/animal

For a year for 50 animals = 30 x 50 x 365 = 5, 47,500 kg. = 5475 qt.

Therefore cost of fodder @ Rs 100/per qt. = 5475 x 100 **= Rs 5, 47,500.**

b) Dry fodder :) Green fodder @ 10 kg/day/animal

For a year for 50 animals = 10 x 50 x 365 = 182500kg. = 1825 qt.

Therefore cost of fodder @ Rs 500/per qt. = 1825 x 500 **= Rs. 9, 12,500.**

2. Concentrate:

Assuming that maintenance requirement is met by green fodder.

The concentrate requirement for production would be as follows:

Average yield of cow = 5 liters/day (assumed), 3 kg milk requires 1 kg concentrate. Therefore: For 5 kg milk requires 5/3 = 1.6 kg concentrates For 40 milking cows, for 365 days = 40 x 1.6 x 365 = 23,360 = 233.60Qts.

For 10 dry cows. For 365 days = @ 1 kg per cow per/day, 1 X 10 X 365 = 3650 kg = 36.5 qt., Total conc. Feed = 233.60 + 36.5 = 270 qt., Cost of concentrate @ Rs 2000/qt. = 270 x 2000= Rs. **5, 40,000**, Minerals and salts requirements are commonly met from the standard ready-made concentrates.

3. Labour Expenses:

(i) Cow needs ½hrs/day man hour labour

Therefore 50 cows need 25 hours/day = 3 labourers + 1 supervisor for Maintenance of dairy farm and for processing of Cow based value added products another 3 labours are required.
Labour cost nearly at the rate of Rs 400/Day = 400 x 7 x 365 = Rs 5, 84,000.

4. Light and Water = Rs 50/animal/month

For 50 animals = 50 x 50 x 12 = **Rs 30,000 per year**.

5. Medicine and A.I. Exp. = Rs 500/animal/year= 500 X 50 = 25,000.

6. For purchase of machinery to process cow dung & urine = Rs 1, 40,000.

S.No.	Name of the machinery	Amount in lakhs	Remarks
1.	Cow dung log machine	0.55	Cow dung logs are used for Cremation
2.	Cow dung mixer	0.35	For agarbatti & dhoopsticks
3.	Cow urine distillation unit	0.5	Used to prepare soaps, Phenoil Go-Ark
Total		1.4	

Total variable cost:

S.No.	Item	Requirement of Qnty for 50 animals / year		Approximate cost in lakhs
1	Green dodder	30 kg/ day/ Animal @ Rs.1/kg		5.47
2	Dry fodder	10 kg/ day/ Animal @ Rs.5/kg		9.125
3	Concentrate feed	1.6 kg/ Animal/Day	270 Qts	5.4
4	Labour (8) expenses	Rs 400*7*365		10.22
5	Light & water	Rs 50/animal/month		0.3
6	Medicine& A.I	Rs 500/animal/year		0.25
7	Machinery for processing of dung & urine			1.4
	Total			**32.17**

III. Total Expenditure = (Total fixed cost + Total variable cost)

=Rs 8, 58,703 + 32, 17,000= Rs 40, 75,703

Income:

1. Sale of milk: @ Rs 100/kg, (As it is Organic)

- ✓ Amount of milk produced 5 x 40 x 365 = 73,000
- ✓ Price of milk = 73,000 x 100 = Rs 73,00,000

2. Sale of cow dung slurry as Manure:

- ✓ Total manure = 10 kg/cow/day x 50 x 365 = 182500 kg
- ✓ (@ 10 kg/cow/day) = 1825 qt. per year
- ✓ Price of manure @ Rs 100 per qt. = Rs 182500/-.

3. Sale of empty gunny bags of concentrates:

- ✓ Total concentrates = 5, 37,000 kg. Amount of conc./bag = 65 kg; No of bags = 5,37,000 /65 = 826 bags Price of gunny bags @ Rs 20 per bag = 826 x 20 = Rs 16,520/-.

4. Sale of calves:

- ✓ 40 calves (20 males and 20 females).
- ✓ Price of male calves @ 1200/- = 20 x 1200 =Rs 24,000 (sold after weaning @age of 12 weeks).
- ✓ Female calves will be retained in the farm.
- ✓ **Additional income :**

I) by selling Cow urine for organic farming:

- ✓ Urine from 50 cows / year = 50 x 10x 365 = 182500 litres

II) Even by selling one litre of urine for Rs.5 he may get Rs. 9, 12,500 by simply selling cow urine for organic cultivation.

III) Income from Value addition products

S.No	Name of Value addition Product/qty	Production Cost per unit in Rs	Total production cost per month in Rs	Sale price per unit in Rs	Total cost of sale/ Month in Rs
1	Go-arK (100 lt) per day so we will get 50 liters of GO-Ark	15 (50*15*30)	22500	60	90000
2	Ekabilva Go-arK (20L)	150 (20*150*30)	90000	500	300000
3	Agarbatties& dhoop -sticks (200)	25 (200*25*30)	150000	60	360000
4	Phenoil(50 L per day)	20 (50*20* 30)	30000	60	90000
5	Vibhoodi(25Kgs	60 (25*60*30)	45000	100	75000
Total			**337500**		**915000**

Needs Marketing through sale counters at Temples, SSG & FPO

***Profit =** Rs. 9, 15,000 – Rs.3, 37,500 **=** 5, 77,500/ Month

As it is marketing of these products depends on marketing skills only 10% of above profit can be taken as fixed income, i.e. Rs. 57750/- Month, if marketing done more profit will be added to this project.

- ✓ Rs,57,750 x 12= Rs. 6,93,000/ Year

- **Total income** :

S.No.	Item	Income in lakhs
1	Sale of organic milk	73.00
2	Sale of cow dung slurry	1.83
3	Sale of empty gunny bags	0.165
4	Sale of calves	0.24
5	sale of Cow urine	9.13
6	sale of Value addition products	6.93
Total		**91.295**

Net profit:

S.No.	Item	Amount in Lakhs
1	Total income	**91.295**
2	Total Expenditure	40.76
Net profit/ year		**50.535**

- **Monthly Income**: **Rs. 50,53,500/12 = Rs. 4,21,125/-**
- **Loan Repayment for 50 Cows Dairy Farm Project**: Bank Loan at the end of the Grace period: Bank Loan (40, 00,000) Bank Loan: Grace Period: 6 Months Interst-12%
- Assume **Rs.88978**/- paid as monthly instalment, his loan will be cleared in 5 years. (Principal 40 lakhs + interest= 13.39 lakh= 53.39 lakhs)
- He will be getting profit o**f Rs. 3, 32,147 -** per month after paying his monthly instalment. (Rs**.** 4,21,125 - Rs.88, 978/= Rs. 3,32,147)

DAIRY UNIT OF 50 Indigenous Cows										
******INPUT DATA******										
TYPE OF ANIMAL(COW/BUFFALLO)						Ind cows				
NO OF ANIMALS						50				
COST OF ANIMAL						50000				
TRANSPORTATION COST/ANIMAL						0				
AVERAGE MILK YIELD						5				
SELLIING PRICE OF MILK/LIT						100				
RATE OF INTEREST (%)						12				

MARGIN MONEY REQUIRMENT (%)						17.232				
REPAYMENT PERIOD						5				
% OF NET INCOME TOWARDS REPAYMENT						40				
(a)CONCENTRATE FEED				LACTATION			DRY			
				QTY (KG)	PRICE (RS)		QTY (KG)	PRICE (RS)		
	(1) MAINTANANCE RATION			0	15		0	15		
	(2)PRODUCTION RATION			1.60	15		0	15		
	(3)PREGNANCY RATION			0	15		0	15		
(b)GREEN FODDER				30	1		30	1		
(c)DRY FODDER				10	5		10	5		
SUMMARY:-										
COST OF SHED							2000000			
COST OF ANIMALS							2500000			
TOTAL COST OF EQUIPMENTS							112750			
Cost of land							250000			
TOTAL FINANCIAL OUTLAY							5000000			
						Say	5000000			
TOTAL BANK LOAN							4000000			

Say							4000000			
LACTATION CHART:		Lactation animals		40	and Dry Animals		10			
				YEARS		**Days**	365			
	I	**II**	**III**	**IV**	**V**	**VI**				
Lactation days	14600	14600	14600	14600	14600	14600				
Cash FLow:										
							YEARS			
PARTICULARS					**I**	**II**	**III**	**IV**	**V**	**VI**
INCOME										
I. FROM SALE OF MILK										
100	/LITRE @				7300000	7300000	7300000	7300000	7300000	7300000
5	LIT/ANIMAL/DAY									
II.FROM SALE MANNURE & GUNNY BAGS @					199020	199020	199020	199020	199020	199020
III. Sale of urine and other products					1605500	1605500	1605500	1605500	1605500	1605500
TOTAL INCOME					9104520	9104520	9104520	9104520	9104520	9104520
EXPENDITURE										
1. CONCENTRATE FEED					540000	540000	540000	540000	540000	540000
2. GREEN FODDER					547500	547500	547500	547500	547500	547500

3. DRY FODDER					912500	912500	912500	912500	912500	912500
4. VETERINARY AID					25000	25000	25000	25000	25000	25000
5. INSURANCE	Y.S.R. Pashu nasta parihara pathakam									
6.Labour and others					1217000	1217000	1217000	1217000	1217000	1217000
TOTAL EXPENDITURE					3242000	3242000	3242000	3242000	3242000	3242000
GROSS SURPLUS					5862520	5862520	5862520	5862520	5862520	5862520
NET PRESENT WORTH (NPW),BENEFIT COST RATIO(BCR),										
	AND INTERNAL RATE OF RETURN (IRR) COMPUTATION									
COSTS :										
CAPITAL COST					5000000					
RECURRING COST*					3242000	3242000	3242000	3242000	3242000	3242000
*******TOTAL COST*******					8242000	3242000	3242000	3242000	3242000	3242000
BENIFITS :										
INCOME					9104520	9104520	9104520	9104520	9104520	9104520
RESIDUAL VALUE*					0	0	0	0	0	0
*******TOTAL BENEFITS**********					9104520	9104520	9104520	9104520	9104520	9104520
-	-	-	-	-	-	-	-	-	-	-
NET BENEFITS					862520	5862520	5862520	5862520	5862520	5862520
-	-	-	-	-	-	-	-	-	-	-

* Capitalised recurring expenses were adjusted from the first year.										
DISCOUNT FACTOR					0.870	0.756	0.658	0.572	0.497	0.432
NET PRESENT VALUE						*17838779*				
BENEFIT COST RATIO(BCR)						*2.12*	*:1*			
**********ENTER GUESS VALUE IN CELL F215**********					1					
INTERNAL RATE OF RETURN (IRR) OF THE SCHEME							*%*			
REPAYMENT SCHEDULE										
Graded Instalments :-		40 %	Of Net Income Towards Repayment							
YEAR	LOAN OUTSTAND		INTEREST	NET INCOME	PRINCI-	TOTAL RE-				
	AT BEGIN OF YEAR				PAL PAID	PAYMENT	SURPLUS			
I	4000000		480000	5862520	1865008	2345008	3517512			
II	2134992		256199	5862520	2134992	2391191	3471329			
III	0		0	5862520	0	0	5862520			
IV	0		0	5862520	0	0	5862520			
V	0		0	5862520	0	0	5862520			
TOTAL				29312600	4000000		24576401	84%	4915280	409606.7
	OK									

Cost of Milk Production										
Recurring expenditure					3242000	3242000	3242000	3242000	3242000	3242000
Repayment of Interest					480000	256199	0	0	0	0
Cost of Milk Production					3722000	3498199	3242000	3242000	3242000	3242000
Milk Production in litres					73000	73000	73000	73000	73000	73000
Cost of Milk Production per litre of milk					50.99	47.92	44.41	44.41	44.41	44.41
Interest per litre					6.58	3.51	0.00	0.00	0.00	0.00

II. Village level: A Cow to a family: 50 indigenous cows in a selected village. The proposed project aims towards holistic development of villages. The indigenous cows rearing organically in small group of dairies (cow per a family and 50 cows in one village who were already registered as FPG/ FIG under MACS Act) and processing of cow products are the major activities for sustainable income and employment generation. The proper management and potential utilization of locally available resources without disturbing the environment will make the village self reliant in economy as envisaged by Mahatma Gandhi.

Project: Gir, Sahiwal and Ongole cows will be supplied from within the state or out of the state with a concept of "a cow to a family- 50 cows as a unit in a selected village''. In this concept also organic milk demand will be collected through Volunteers by sensitisation of people in rural, nearby small towns and supplied directly to consumers. Volunteer will be paid Rs.1-2/litre of milk as an incentive towards collecting demand for organic milk.

Three Entrepreneurs will be identified one for supply of green fodder, another for collection organic of Milk and third for collection of dung & Urine**.** Entrepreneur will collect, urine and dung from 50 households daily for making value addition products like cow dung logs ,dhoopsticks, GO-ARK etc.(Details of value addition products is enclosed in Annexure) by which hygienic environment will be created. He will pay Rs.5/litre of urine and Rs.1000/ ton of dung on monthly basis to 50 farmers. Local people will be given training as per need for their skill development, processing of the material and in organic farming, to fetch more income for them. Entrepreneurs may be provided Rs.75, 000/- under Aasara.

Resource generated from Village:

S. No.	**Resource generated from a cow**	**Resource generated from a Village as 50 cows as unit**
1.	Average dung production per day per cow 10 kg.	500 per day
2.	Average milk production per day per cow approx. 5 litres.	250 litres.
3.	Average urine production from one cow 5 litre per day.	250 litres
4.	A Calf a year	50 calves

A. Nonrecurring Expenditure:

1. Cow cost: Rs.50, 000/per Cow, 50* Rs.50, 000 = 25, 00,000
2. Breeds: Gir, Sahiwal & Ongole

B. Recurring Expenditure:

Feeding Inputs	**For one Milking cow per day**	**Amount/ Per day**	**Amount/ Month**	**Remarks**
Dry Fodder @ Rs. 5 /kg	8 kgs	Rs.40	1200	Fodder inputs will be Supplied by the indentified Entrepreneur from organic Farm
Green Fodder @ Rs. 2 /kg	20kgs	Rs.40	1200	
Concentrate	2kgs	Rs.40	1200	
Total		**Rs.120**	**3600**	

Earnings to Farmer per one cow:

S. No.	**Item**	**Yield per day**	**Sales / Per day in Rs**	**Sales / Per Month in Rs.**
1	**Organic Milk**	5 litre	5*100=500	**15,000**
2	Urine	5 litre	5*5=25	750
3	Dung	10 kg.	10*5= 50	1500
Total				**Rs. 17,250/ Month**

- Profit = (Monthly Income) Rs.17250- 3600 (Monthly Recurring Expenditure) = Rs.13650/ Month**.**
- **Loan repayment = Rs. 1660/Month for 36 Month (3 Years), Rs.9785/-as interest for 3 years.**
- **Net Income:** Rs.13650- Rs.1660 **= Rs.11, 990/- Month & 1.438 Lakhs/year**

Returns to the entrepreneurs:

- **Fodder entrepreneur** preferably selected who has fodder plots (May be some own & some on lease for fodder rearing) will supply the fodder inputs (Green+ dry= Con. feed) to the 50 farmers. He may be provided Rs.75, 000 under AASARA for purchase of chaff cutter etc.
- By selling Dry & Green fodder to 50 farmers he will earn Rs.2400*50= 1, 20,000/Month, after investment for lease & labour he will gain nearly 50,000/ month only from fodder.
- **Milk Collection Centre entrepreneur**: Can earn Rs. 2 / Litre of milk so 500 litres * Rs.2 = 1000/ day & 30,000/ Month. He may be provided Rs.75, 000 under AASARA for purchase of milk collection unit.
- **Dung & urine entrepreneur: (Depends upon Marketing)**
  From 50 cows he can prepare nearly 6000 dung cakes by adding paddy husk. Rural women can be involved in preparation of dung cakes by offering Rs.1/ per cake & entrepreneur can sell each cake @ Rs. 3.
  Cow dung = 0.5 ton (500 kgs) for Rs.500
  Preparation of dung = Rs.1/ one cake.
  Profit = 6000* 1.5= Rs.9, 000/
  - **Income from urine: (Depends upon Marketing)** from cow 500 Litres of urine & he can earn = **500*5 = 2500/Day.** He may be provided Rs.75, 000 under AASARA for purchase of machinery for processing cow dung & urine.

Training: Required training will be provided at NKBC Chintaladeevi farm, Nellore district, or existing progressive farmers (ex: Surabhi Goshala at Perikalapadu Krishna District) in convergence with SERP/ Skill Development Corporation.

Sensitization for organic milk, cow dung, urine value addition products & organic farming will be created through Volunteers, Village Secretariat.

Following Value addition products can be prepared through Cow dung & Urine:

1. Jeevamrutham: Follow the steps to prepare Jeevamrutham for one acre of the crop:

- Take a water barrel or a tank that is big enough to have 200 liters of water, now pour 200 litres of water into the tank or barrel.
- Do keep the water barrel in the shade.
- Add 10kgs of Desi cow dung into the water.
- Stir the mixture well with the help of stick in clockwise. If you can use your hand to stir, it's even better. Most of the beneficial microbes are present in the mixture.
- Now add the handful of fertile soil from your farm with 10 litres of Desi cow urine to the mixture. Stir it well again clockwise.
- Finally, add the semi powdered jaggery and the flour to the mixture, stir again. Give a proper stir for some time, till you know all the mixture is mixed well.

2. Ghana Jeevamrutham No.1 per acre.

- Take 100 kg of Desi Cow Dung (Cow dung is good for 21 days if its kept moist. by sprinkling water and storing in shade))
- 1Kg Bellam / Jaggery
- 1kg Besan
- Mix it / Knead it well. Store it as a Heap / hump for 48 hrs in a shade. (No Water / Rain or Sunlight must fall on this heap)

If the Temperature drops below 12 degre, this heap needs to be covered with rug sack to keep a constant Temperature for conductive climate for micro-organisms. After 48hrs, Spread it on land and dry it. Flip it upside down during the day so that all particles get exposed to sunlight and dries up. Once it's completely dried up break the lumps into powder form using Wooden bat.

Fill them into Sacks and store it. This will be good enough for 1 Acre.

Second method of Ghana Jeevamrutham preparation per acre:

- 200kg Dried and sieved Powered Cow dung Farm Manure.
- Spread it slightly and Sprinkle 20ltr Jeevamrutham over it. Mix it well using a spade thoroughly.
- Form a heap in shade of this mixture and keep away from water and Sunlight for 48hrs.
- If the Temperature drops below 12 deg, this heap needs to be covered with rug sack to keep a constant Temperature for conductive climate for micro-organisms.
- After 48hrs, spread and dry the mixture under the sun and mix it during the day to dry it properly.
- Once it's completely dried up break any existing lumps into powder form using Wooden bat
- Fill them into Sacks and store it. This will be good enough for 1 Acre.

This can be used for 1 yr.

3. GO-ARK – Gomutra-Ark:

Preparation: GO-ARK is prepared by boiling cow-urine in an iron pot to which a vapour condensing device is attached. Cow Urine Benefits is achieved by using for long period.
Mode of action on human body: Cow eats various herbs, the metabolite of which can be present in urine. Many useful elements have been found in cow urine. The metabolite found in urine might have antihyperglycemic action. Further Go-Ark has an antioxidant effect. Cow urine contains volatile fatty acids which act as antioxidant; the antioxidant potential might be contributing for the anti- hyperglycemic effect, by preventing formation of the free radicals which cause damage to the beta cells of pancreas.

4. Cow dung soaps: For use in soap, the wet cow dung is dried and pulverized. It then undergoes heat treatment to destroy bacteria. What remains is a fine brown-black powder that doesn't smell like cow dung. It is added to the soap mix along with essential oils like citronella, basil and sandalwood.

Other Cow dung Products:

i. **Mosquito repellents**:
ii. **Cow dung Dhoopsticks**
iii. **Cow dung cakes**
iv. **Cow dung logs for cremation.**

Budget Required Implementing Entire Project:

S.No.	Name of the project	Number	Amount in lakhs
1	Progressive Farmer	1	40.00
2	Village level through Registered FPO/FIG	50	25.00
Total			**65.00**

CONCLUSION:

The fear of Covid is making a large number of people turn towards organic farming. The demand for organic Milk, vegetables, jaggery made from organically-grown sugarcane and other products like rice, basmati, pulses and millets has risen. Importance for organic and chemical free food consumption is growing rapidly. Consumers are ready to pay more money to get a quality food. Farmers need to hold this entrepreneurial opportunity to fasten economic empowerment. To provide sustainable employment, hygienic environment and better livelihood in rural villages are the major thrust areas in the country today. As Andhra Pradesh Government has already established Village Secretariat System which can be utilised for marketing and sensitization for organic farming.

This project can become a model to achieve these goals as there is need to develop a holistic approach in which local resources are utilized efficiently by rural masses. The large quantity of organic manure can also be produced in village having large number of animals. Vermi compost, pesticides and herbicides can be prepared by cow urine & cow dung and Neem leaves formulations in large quantity at village level which is key factors for organic farming.

With little training and efforts the proposed project of integrated cycle of cow raises per capita income of rural families and able to generate enough employment to stop migration. Indigenous cow is the focal point of the project with all backward forward linkages.

POONAM MALAKONDAIAH
SPECIAL CHIEF SECRETARY TO GOVERNMENT(FAC)